SECOND AMENDMENT TO ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT, CERCLA DOCKET NO. 2010-06 SOIL GAS AND VAPOR INTRUSION TO INDOOR AIR EVALUATION MOTOROLA 52ND STREET SUPERFUND SITE, OPERABLE UNIT 1

Pursuant to Paragraph 103 of the Administrative Settlement Agreement and Consent Order, EPA Docket Number 2010-06 ("Settlement Agreement"), EPA and Respondent Freescale Semiconductor, Inc. (Freescale), agree to amend the Settlement Agreement to include the conduct of a vapor intrusion to indoor air investigation at the former Motorola 52nd Street facility property (the Motorola Facility) now owned and occupied by multiple owners. This is the second amendment to the Settlement Agreement. The first amendment to the settlement agreement was entered for the off-facility vapor intrusion investigation and mitigation effort conducted in the neighboring areas from 2011 to 2015.

EPA and Respondent agree to amend the Settlement Agreement as follows:

Section V (Findings of Fact) is amended to include the following:

Paragraph 20B: Pursuant to the first amendment to the Settlement Agreement, a soil gas investigation (2011) and residential sub-slab and indoor air sampling, and commercial indoor air sampling have been conducted in the neighborhoods to the west and northwest of the Motorola Facility (July 2011 through March 2015). As part of the indoor air investigation, 115 residential locations, seven commercial locations, and four schools have been sampled to date. Based on results and pursuant to the first amendment to the Settlement Agreement, sub-slab depressurization systems have been installed at 15 locations to mitigate potential vapor intrusion.

Based on the following historical investigations at the Motorola Facility, EPA is requiring an evaluation of the vapor intrusion to indoor air pathway at the former Motorola Facility. The activities outlined in this second amendment to the Settlement Agreement will be conducted to meet EPA's requirements for the facility vapor intrusion investigation.

- The Motorola Facility is located on approximately 90 acres at 5005 East McDowell Road in Phoenix, Arizona and was operated by Motorola from 1956 until the third quarter of 1999, when Motorola's Communications, Power and Signal Technology Group was split off to become ON Semiconductor. ON Semiconductor continued manufacturing operations at the former Motorola Facility until 2011; since that time, ON Semiconductor has maintained only offices and laboratories at the Motorola

Facility property. Additionally, some portions of the Motorola Facility property have been sold to other entities not necessarily affiliated with Motorola.

- During its operations at the Motorola Facility, Motorola reported releases of various chemicals including volatile organic compounds (VOCs), such as 1,1,1 trichloroethane (TCA), trichloroethylene (TCE) and perchloroethylene (PCE). Following reports of a leaking UST in the Courtyard area of the Facility in 1982, in accordance with agreements with both ADEQ and EPA, Motorola, and later Freescale on Motorola's behalf, conducted soil, groundwater, and soil vapor investigations. During the investigation of the former Motorola Facility, three primary source areas were identified: the Courtyard, the Acid Treatment Plant (ATP), and the Southwest Parking Lot (SWPL). The highest VOC concentrations were found in the Courtyard. Since 1983, Motorola or Freescale has been conducting soil and groundwater remedial activities and further Site investigation under the Consent Order (CO) with ADEQ.

- Courtyard: As noted above, the highest VOC concentrations at the Motorola Facility were found in the Courtyard area. From June 1992 through March 1993, Motorola operated a soil vapor extraction (SVE) system in the Courtyard. After removal of approximately 350 pounds of VOCs, Motorola submitted the Courtyard SVE Pilot Program Summary Report (Dames and Moore, 1994). In December 1995, Hydro Geo Chem, Inc., on behalf of Motorola, conducted a soil gas investigation in the Courtyard, the results of which were included in a report on the Evaluation of Soil Remediation by Soil Vapor Extraction, Courtyard Area, Motorola 52nd Street Facility (Hydro Geo Chem, 1997) submitted to ADEQ by Motorola in 1997. The soil gas sampling from this evaluation showed that a TCE concentration of 4,300 ug/L was detected at 20 feet near the former SVE well and the former drywell.

- SWPL: In February 1993, an air sparging/SVE pilot program was conducted in two locations within the Southwest Parking Lot (SWPL) area, removing approximately 265 pounds of VOCs. In April 1995, Motorola submitted the Pilot Program Report detailing the results of the SWPL Air Sparging/SVE system pilot operations. Based on the pilot results, Motorola implemented SVE operations at the SWPL in November 1996 which continued through April 1997. Approximately 170 additional pounds of VOCs were removed during post-pilot system operation. Motorola's December 1998 Soil Vapor Extraction System Evaluation Report for the SWPL evaluated the 1996-1997 air sparging and soil vapor extraction operations in the SWPL area. Motorola submitted a letter to ADEQ on March 21, 2001, requesting closure of the SWPL SVE system, which ADEQ granted for SWPL Area soil cleanup on November 15, 2002.

- ATP: No active soil remediation has taken place in the ATP area to date and limited soil and soil vapor characterization has been conducted as part of prior Motorola Facility-wide investigations.

- Motorola conducted a number of soil gas surveys at the Motorola Facility (November 1984, March 1985, 1989, 1991, and 1995). Using the then-current soil gas screening levels, those evaluations concluded that elevated soil gas concentrations were only found in the Courtyard and ATP areas. However, historical soil gas concentrations from the SWPL area are elevated when compared to the 2014 EPA Site-specific Soil Gas Human Health Screening Levels (SGHHSLs).

- The eastern portion of the 90-acre property has not yet been fully evaluated. There is only limited historical or current groundwater and soil gas information in this eastern portion except for limited sampling conducted by a prospective property purchaser in 2014. Historically, most of the area has remained undeveloped and currently the area is occupied by parking lots and vacant land. Sampling in the eastern portion of the property will provide basic information regarding current environmental conditions in order to assess the vapor intrusion pathway.

- Freescale, on behalf of Motorola, routinely samples 30 groundwater monitoring wells (alluvial and bedrock) for VOCs at the former Motorola Facility property and concentrations of TCE in the alluvium range from <0.5 ug/L to 158 ug/L in the most recent round (September 2014), with higher concentrations up to 3,940 ug/L observed in bedrock wells near the Courtyard area. Water levels near the Courtyard area range from 40 to 55 feet below ground surface.

- Historical soil vapor data shows concentrations greater than current EPA SGHHSLs in each of the former source areas. Because historical soil vapor data from the ATP, Courtyard, and SWPL areas as well as the eastern portion of the property were last collected in the mid-1990s, they may not reflect current Site conditions. Accordingly, additional information is necessary for characterization of current soil gas conditions at the Motorola Facility property in order to fully evaluate the vapor intrusion to indoor air pathway.

Section IX, (Work to be Performed) is amended to include the following:

Paragraph 36h (Modification of the Work Plan). Based on the Findings of Fact set forth above, a vapor intrusion investigation is necessary to determine whether there is a vapor intrusion risk at the Motorola Facility property and to determine whether mitigation is necessary. Through this second Settlement Agreement amendment, the Scope of Work for the 2010 AOC is modified to include the requirement of an Industrial Vapor Intrusion to Indoor Air Evaluation Work Plan (Work Plan) that will provide for the work necessary to investigate the vapor intrusion to indoor air pathway at the Motorola Facility property. The Industrial Vapor Intrusion to Indoor Air Evaluation will evaluate the potential for vapor intrusion throughout the Motorola Facility property and will include indoor air sampling in all enclosed buildings on the western side of the Motorola Facility property. Indoor air in enclosed buildings on the eastern side of the Motorola Facility property will be sampled where required based on exceedances of the industrial/commercial SGHHSLs in soil gas samples collected as described below. The Work Plan should generally follow Attachment 2 of EPA Region 9's Framework for Investigating Vapor Intrusion at Residential and Commercial/Industrial Buildings, Motorola 52nd Street Superfund Site (Framework, Exhibit A), except where specified herein. In accordance with Attachment 2 of the Framework, the Work Plan should include two components: (1) soil gas sampling and analysis, and (2) indoor air evaluation. These components should specifically include:

- Soil vapor sampling in the SWPL, ATP, eastern portion, and Courtyard areas using EPA SSGHSLs.

- In lieu of establishing a Vapor Intrusion Study Area using step-outs as set forth in the Framework, Freescale will conduct soil gas sampling at the perimeter of each existing enclosed building on the western portion of the Motorola Facility property.

- Because little current information exists for the eastern portion of the Motorola Facility property, a plan to conduct soil gas sampling in this area using a transect approach to determine the contaminant concentrations in this area; step-out sampling pursuant to the Framework will be conducted in any area where concentrations exceed the industrial/commercial SGHHSLs.

- A plan to obtain access from the multiple property owners at the Motorola Facility property for purposes of conducting the work. In the event access cannot be secured from one or more of the owners following use of best efforts as set forth in Section XII, paragraph 53 of the Settlement Agreement, Freescale will promptly request EPA assistance.

- A plan to perform an inventory of each enclosed building where indoor air sampling will be conducted, including current building uses and floor plans, as well as foundation, elevator, and ventilation system (HVAC) information, if available. The building inventory will be used to assess, on a building specific basis: 1) the feasibility of collecting sub-slab samples; and 2) proposed indoor air sampling locations. EPA should be included in a walk-through of each building.

- At least two (2) rounds of sampling at soil vapor monitor points installed to 15 feet below ground surface (bgs) or as modified by the work plan at the locations identified in the work plan and any step-outs identified during field work.

- For the enclosed buildings on the western portion of the Motorola Facility property, a minimum of two (2) rounds of indoor air sampling (one in the hot season and one in the cooler season). Each seasonal round of sampling should be conducted with the HVAC off where determined to be operationally feasible. Where it is not operationally feasible to shut the HVAC off entirely, sampling should be conducted with HVAC set at its lowest routine operating settings and those settings should be fully documented. For the enclosed buildings on the western portion of the Motorola Facility property, the first round of indoor air sampling should be conducted on an expedited schedule after conducting the soil gas sampling adjacent to the buildings.

- For the enclosed buildings on the eastern portion of the Motorola Facility property, if the soil gas data adjacent to any of the buildings exceed the industrial/commercial SGHHSLs, then a minimum of two (2) rounds of indoor air sampling will be conducted at each of those buildings. If soil gas results in the vicinity of any enclosed buildings on the eastern portion of the Motorola Facility property show subsurface TCE levels corresponding to the potential to exceed EPA's Regional Indoor Air Accelerated Response Action Levels (see page 15 of the Framework, Exhibit A) in indoor air, indoor air sampling will be performed on an expedited schedule following that round of soil gas sampling.

- At each building where indoor air sampling is required and where sub-slab sampling has been determined to be feasible, two (2) rounds of sub-slab sampling will be conducted contemporaneous with the indoor air data collection.

- Indoor air sampling results will be compared to EPA's Regional Indoor Air Accelerated Response Action Levels and a contingency plan for mitigation will be prepared in advance to be implemented in case accelerated indoor air levels for TCE are exceeded.

Respondent will submit the Draft Work Plan to EPA for approval within 45 days of EPA's signature of this AOC, and the Scope of Work is modified to include the work approved in such work plan. The Final Industrial Vapor Intrusion to Indoor Air Evaluation Work Plan will be incorporated into the Scope of Work.

Paragraph 39e (Reporting). Final Industrial Vapor Intrusion to Indoor Air Evaluation Report: Within forty-five (45) days after Respondent's receipt of the final set of validated data from indoor air sampling pursuant to the Final Industrial Vapor Intrusion to Indoor Air Evaluation Work Plan, Respondent shall submit a Draft Industrial Vapor Intrusion to Indoor Air Evaluation Report. This Draft Report shall summarize the indoor air investigation conducted at the Motorola Facility and will be submitted and drafted in accordance with the Final Industrial Vapor Intrusion to Indoor Air Evaluation Work Plan. Respondent will revise the Draft Report in accordance with EPA comments and submit a final report for EPA review and approval within thirty (30) days after receipt of EPA comments. The Final Industrial Vapor Intrusion to Indoor Air Evaluation Report shall include the following certification signed by a person who supervised or directed the preparation of that report:

> "Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Respondent shall submit a good faith estimate of total costs or a statement of actual costs incurred in conducting the Motorola Facility indoor air investigation in compliance with this Settlement Agreement within forty-five (45) days after submittal of the Final Industrial Vapor Intrusion to Indoor Air Evaluation Report.

Section XVI (Stipulated Penalties) is amended to include the following:

> Paragraph 63.b.x– Submittal of Draft and Final Industrial Vapor Intrusion to Indoor Air Evaluation Work Plan;

Paragraph 63.b.xi – Submittal of Draft and Final Industrial Vapor Intrusion to Indoor Air Evaluation Report.

Agreed this 24 day of April, 2015.

For **Freescale Semiconductor, Inc.**

By _____

Title Director Site Services

It is so ORDERED and Agreed this _____ day of _____, 2015.

BY: _____

Angeles Herrera
Assistant Director, Superfund Division
Federal Facilities and Site Cleanup Branch
U.S. EPA Region IX

Paragraph 63.b.xi – Submittal of Draft and Final Industrial Vapor Intrusion to Indoor Air Evaluation Report.

Agreed this ___ day of _____, 2015.

For **Freescale Semiconductor, Inc.**

By _____

Title _____

It is so ORDERED and Agreed this 5 day of May, 2015.

BY: _____

Angeles Herrera
Assistant Director, Superfund Division
Federal Facilities and Site Cleanup Branch
U.S. EPA Region IX